

§ 183.430 Conductors in circuits of less than 50 volts.

(a) Each conductor in a circuit that has a nominal voltage of less than 50 volts must:

(1) Meet the requirements of § 183.435; or

(2) Meet:

(i) The insulating material temperature rating requirements of SAE Standard J378; and

(ii) SAE Standard J1127, or SAE Standard 1128.

(b) This section does not apply to communication systems; electronic navigation equipment; resistance conductors that control circuit amperage; and pigtailed of less than seven inches of exposed length.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977, as amended by CGD 87-009, 53 FR 36971, Sept. 23, 1988]

§ 183.435 Conductors in circuits of 50 volts or more.

(a) Each conductor in a circuit that has a nominal voltage of 50 volts or more must be:

(1) A conductor that has insulation listed and classified moisture resistant and flame retardant in Article 310, NFPA No. 70, National Electric Code;

(2) A flexible cord type SO, STO, ST, SJO, SJT, or SJTO listed in Article 400, NFPA No. 70, National Electric Code;

(3) A conductor that meets IEEE Standard 45.

(4) A conductor that meets UL Standard 1426.

(b) Where the nominal circuit voltage of each of three or more current carrying conductors in a duct, bundle, or cable is 50 volts or more, the amperages of each of those conductors must not exceed the value in table 5 multiplied by the correction factor in note 2 to Table 5 for the number of conductors that carry 50 volts or more.

(c) This section does not apply to communication systems; electronic navigation equipment; resistance conductors that control circuit amperage; conductors in secondary circuits of ig-

niton systems; and pigtailed of less than seven inches of exposed length.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977; 42 FR 24739, May 16, 1977, as amended by CGD 80-047 and CGD 80-046, 45 FR 85450, Dec. 29, 1980; CGD 87-009, 53 FR 36972, Sept. 23, 1988]

§ 183.440 Secondary circuits of ignition systems.

(a) Each conductor in a secondary circuit of an ignition system must meet SAE Standard J557.

(b) The connection of each ignition conductor to a spark plug, coil, or distributor must have a tight fitting cap, boots, or nipple.

§ 183.445 Conductors: Protection.

(a) Each conductor or group of conductors that passes through a bulkhead, structural member, junction box, or other rigid surface must be protected from abrasion.

(b) Each ungrounded terminal or stud that is continuously energized must meet § 183.455 or must have a boot, nipple, cap, cover, or shield that prevents accidental short-circuiting at the terminals or studs.

[CGD 81-092, 48 FR 55736, Dec. 15, 1983]

§ 183.455 Overcurrent protection: General.

(a) Each ungrounded current-carrying conductor must be protected by a manually reset, tripfree circuit breaker or fuse.

(b) A manually reset, trip-free circuit breaker or fuse must be placed at the source of power for each circuit or conductor except:

(1) If it is physically impractical to place the circuit breaker or fuse at the source of power, it may be placed within seven inches of the source of power for each circuit or conductor measured along the conductor.

(2) If it is physically impractical to place the circuit breaker or fuse at or within seven inches of the source of power, it may be placed within 40 inches of the source of power for each circuit or conductor, measured along the conductor, if the conductor is contained throughout its entire distance between the source of power and the required circuit breaker or fuse in a

sheath or enclosure such as a junction box, control box, or enclosed panel.

(c) The current rating of each circuit breaker or fuse must not exceed:

(1) For circuits of less than 50 volts, 150% of the value of the amperage in Table 5 for the conductor size it is protecting; and

(2) For circuits of 50 volts or more, the value of the amperage in Table 5 for the conductor size it is protecting. If this value does not correspond to a standard size or rated circuit breaker or fuse the next larger size or rated circuit breaker or fuse may be used if it does not exceed 150% of the allowed current capacity of the conductor.

(d) The voltage rating of each circuit breaker or fuse must not be less than the nominal circuit voltage of the circuit it is protecting.

(e) This section does not apply to resistance conductors that control circuit amperage; conductors in secondary circuits of ignition systems; pig-tails of less than seven inches of exposed length; and power supply conductors in cranking motor circuits.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977, as amended by CGD 78-090, 44 FR 68466, Nov. 29, 1979]

§ 183.460 Overcurrent protection: Special applications.

(a) Each ungrounded output conductor from a storage battery must have a manually reset, trip-free circuit breaker or fuse, unless the output conductor is in the main power feed circuit from the battery to an engine cranking motor. The circuit breaker or fuse must be within 72 inches of the battery measured along the conductor, unless, for boats built prior to August 1, 1985, the circuit has a switch that disconnects the battery.

(b) Each ungrounded output conductor from an alternator or generator, except for self-limiting alternators or generators, must have a circuit breaker or fuse that has a current rating that does not exceed 120 percent of the maximum rated current of the alternator or generator at 60° C.

[CGD 73-217, 42 FR 5944, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55736, Dec. 15, 1983]

Subpart J—Fuel Systems

SOURCE: CGD 74-209, 42 FR 5950, Jan. 31, 1977, unless otherwise noted.

GENERAL

§ 183.501 Applicability.

(a) This subpart applies to all boats that have gasoline engines, except outboard engines, for electrical generation or mechanical power for propulsion.

(b) [Reserved]

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55736, Dec. 15, 1983]

§ 183.505 Definitions.

As used in this subpart:

Flame arrestor means a device or assembly that prevents passage of flame through a fuel vent.

Fuel system means the entire assembly of the fuel fill, vent, tank, and distribution components, including pumps, valves, strainers, carburetors, and filters.

Static floating position means the attitude in which a boat floats in calm water, with each fuel tank filled to its rated capacity, but with no person or item of portable equipment on board.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 85-098, 52 FR 19728, May 27, 1987]

§ 183.507 General.

Each fuel system component on a boat to which this subpart applies must meet the requirements of this subpart unless the component is part of an outboard engine or is part of portable equipment.

EQUIPMENT STANDARDS

§ 183.510 Fuel tanks.

(a) Each fuel tank in a boat must have been tested by its manufacturer under § 183.580 and not leak when subjected to the pressure marked on the tank label under § 183.514(b)(5).

(b) Each fuel tank must not leak if subjected to the fire test under § 183.590. Leakage is determined by the static pressure test under § 183.580, except that the test pressure must be at least one-fourth PSIG.